

**REMARKS**

Applicants have received and reviewed an Office Action dated May 7, 2003. By way of response, Applicants have amended claims 2, 4, 7, 9 and 46. No new matter is presented. Claims 1-48 are pending. Applicants submit that the pending claims are supported by the specification.

For the reasons given below, Applicants submit that the amended claims are in condition for allowance and notification to that effect is earnestly solicited.

**Claim rejections under 35 U.S.C. § 112**

Claims 1-18 and 40-43 are rejected under 35 U.S.C. § 112. Applicants respectfully traverse this rejection.

The Examiner indicated that in claim 1, the "additive of interest" is in the "sub-culturing step" when it is in the "culturing" step in claim 4. Applicants have amended claim 4 to replace the term "culturing step" with the term "sub-culturing step".

Claim 2 has been amended to remove the objected-to term "optimized formation".

Claims 7 and 46 have been amended to delete the occurrence of the multiple names.

Claim 9 has been amended so that the word "one" is inserted before the phrase "plant growth regulator".

These amendments to not narrow the claims.

Accordingly, it is believed that the amended claims fully comply with § 112, second paragraph, and withdrawal of this rejection is respectfully requested.

**Claim rejections under 35 U.S.C. §§ 102/103**

Applicants submit that the claims of the present invention are commonly owned.

Claim 47 is rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over Cellarova, et al. Applicants respectfully disagree and traverse this rejection.

Claim 47 pertains to a phytopharmaceutical plant prepared by the method of claim 1 that comprises an elevated level of an additive of interest when compared to a plant grown in the absence of an additive of interest. The method disclosed claim 1 involves adding the additive of interest to the basal medium used for subculturing plantlets.

Cellarova is directed to the *in vitro* culture and the production of hypericin and other secondary metabolites in *Hypericum perforatum* (Saint John's Wort). On page 267, last paragraph, it is noted that *Hypericum* cultures were obtained using a basal RM medium (of Linsmaier and Skoog, 1965), which is analogous to the basal medium (of Murashige and Skoog, 1962) that is used in the present invention (see page 33, bottom paragraph). There is no teaching in Cellarova of adding any additives to the basal medium, as is done in the method of claim 1. There is also no teaching in Cellarova of producing a plant that comprises an elevated level of an additive of interest. Rather, Cellarova teaches *in vitro* culture and the production of metabolites that are naturally produced in culture. There is no disclosure that additives of interest might be elevated in the plant, as is the case in claim 47, which provides a plant produced by the method of claim 1, directed to *in vitro* micropropagation and phytofortification of a phytopharmaceutical plant.

Further, Applicants assert that the Cellarova article is not citable for obviousness because there is also no suggestion of producing a plant that comprises an elevated level of an additive of interest in Cellarova. It is submitted that a person of skill in the art would not be motivated to supplement the basal medium with an additive of interest to produce a phytopharmaceutical plant comprising an elevated level of the additive of interest.

Accordingly, based on the foregoing differences, it is believed that the presently claimed methods and plants are neither taught nor suggested by the references cited in this rejection, and withdrawal of this rejection is respectfully requested.

Claims 1-18, 40, and 42-48 stand rejected under 35 U.S.C. § 103(a) as being obvious over Stojakowska et al., in view of Murthy et al., and further in view of Cellarova, et al. Applicants respectfully traverse this rejection.

Stojakowska pertains to the production of parthenolide in organ cultures of fever few. The document assesses the accumulation of parthenolide content in the cultivated plant organs by RP-HPLC and indicates that the production of the compound was strongly influenced by the genotype of the parent plant and ranged from 0.13% to 0.75% dry weight in the shoots of the rooted plantlets grown *in vitro*. There is no teaching or suggestion that parthenolide may be added to the basal medium to increase uptake and accumulation of such an additive of interest in the plantlet. There is also no teaching or suggestion of a method for *in vitro* micropropagation and phytofortification of a phytopharmaceutical plant comprising the step of sub-culturing

plantlets on a basal medium containing at least one additive of interest to allow uptake and accumulation of said at least one additive of interest in a bio-available form in the plantlet.

Examiner alleges that Murthy et al. teach the accumulation of mineral ions due to thidiazuron. However, Applicants note that thidiazuron is not used in the medium employed in the presently claimed method. For example, the presently claimed subculturing (e.g. step (c) of claim 1), which is when the additive of interest is provided to the plant does not recite thidiazuron. Furthermore, there is also no teaching or suggestion in Murthy et al. of adding an additive to the basal medium to allow uptake and accumulation of the additive in the plant, as defined in the method of claim 1.

As argued above, Applicants submit that Cellarova et al. do not teach or suggest adding any additives to the basal medium, as is done in the method of claim 1. Applicants therefore assert that Stojakowska et al., in view of Murthy et al., and further in view of Cellarova et al., do not render obvious, alone or in combination, any of the subject matter defined by the claims of the present application.

Accordingly, based on the foregoing differences, it is believed that the presently claimed methods and plants are neither taught nor suggested by the references cited in this rejection, and withdrawal of this rejection is respectfully requested.

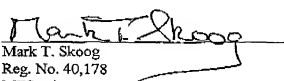
#### Summary

In view of the above amendments and remarks, Applicants respectfully request a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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